**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-24. (Canceled).

25. (New) An image processing device comprising:

a raster scanning type image input module which reads images from a document and outputs image signals indicating the images, at different sampling rates; and

a filter processing module which performs filter processing on the image signals output from the raster scanning type image input module,

wherein:

the raster scanning type image input module outputs, in synchronism with an image clock, a first or second image signal read at a preset sampling rate or a sampling rate higher than the preset sampling rate in a main scanning direction and a sub-scanning direction of the document, when a sampling rate of reading of the document is switched by an external sampling rate selection signal and the sampling rate selection signal is in a low sampling rate mode or a high sampling rate mode, the raster scanning type image input module also outputting a main-scanning-directional image effective signal when the first or second image signal is output;

the filter processing module includes a line memory controller supplied with the first or second image signal output from the raster scanning type image input module, the main-scanning-directional image effective signal, and the image clock, a plurality of line memories connected to the line memory controller, an image window section connected to the line memory controller, a filter computing section connected to the image window section, a selector connected to the filter computing section and serving as a filter factor selecting module, a filter factor 1 setting section connected to the selector and serving as a filter factor setting module, and a filter factor 2 setting section connected to the selector and serving as a filter factor setting module, the filter factor selecting module selecting either the filter factor 1 setting section or the filter factor 2 setting section in accordance with the sampling rate selection signal;

the line memory controller sequentially stores the first or second image signal, output from the raster scanning type image input module, into the line memories in units of lines in accordance with the main-scanning-directional image effective signal, reads image data of (W x H) pixels around a to-be-processed pixel, including the to-be-processed pixel, from the first or second image signal, stored in the line memories, in accordance with the image clock, and outputs the image data to the image window section, whereby the image window section latches the image data of (W x H) pixels output from the line memory controller, the latched image data being output to the filter computing section;

the filter computing section multiplies each piece of the image data by a filter factor output from the selector as the filter factor selecting module, using a corresponding one of multipliers, and sums up resultant data pieces using a total adding machine;

a total value output from the total adding machine is expressed as a numerical value of (±m, n), m being an integer of m bits, n being a decimal fraction of n bits, (±m, n) being accordingly (m + n + 1) bits; and

the total value is converted into an integer by an integrator and output as a filter processing result of an integer of m bits.

26. (New) The image processing device according to claim 25, wherein the filter factor selected by the selector as the filter factor selecting module and used during the filter processing is used for switching a cutoff frequency.

27. (New) The image processing device according to claim 26, wherein the filter factor selected by the selector as the filter factor selecting module and used during the filter processing is used for making a cutoff frequency corresponding to the first image signal lower than a cutoff frequency corresponding to the second image signal.

28. (New) The image processing device according to claim 26, wherein:

the filter factor selected by the selector as the filter factor selecting module and used during the filter processing is used for making a cutoff frequency corresponding to the first image signal lower than a frequency acquired by subtracting a main frequency component of

an input image signal from twice a vector indicating a Nyquist frequency during processing of the first image signal; and

the filter factor is used for making a cutoff frequency corresponding to the second image signal lower than a main frequency of the input image signal.

29. (New) The image processing device according to claim 26, wherein:

the filter factor selected by the selector as the filter factor selecting module and used during the filter processing is used for making a cutoff frequency corresponding to the first image signal lower than a frequency acquired by subtracting a number of screen lines contained in the document and providing the first image signal, from twice a vector indicating a Nyquist frequency during processing of the first image signal; and

the filter factor is used for making a cutoff frequency corresponding to the second image signal lower than the number of the screen lines contained in the document.

30. (New) An image processing device comprising:

raster scanning type image input means for reading images from a document and outputting image signals indicating the images, at different sampling rates; and

filter processing means for performing filter processing on the image signals output from the raster scanning type image input means,

wherein:

the raster scanning type image input means outputs, in synchronism with an image clock, a first or second image signal read at a preset sampling rate or a sampling rate higher than the preset sampling rate in a main scanning direction and a sub-scanning direction of the document, when a sampling rate of reading of the document is switched by an external sampling rate selection signal and the sampling rate selection signal is in a low sampling rate mode or a high sampling rate mode, the raster scanning type image input means also outputting a main-scanning-directional image effective signal when the first or second image signal is output;

the filter processing means includes a line memory controller supplied with the first or second image signal output from the raster scanning type image input means, the main-scanning-directional image effective signal, and the image clock, a plurality of line memories

connected to the line memory controller, an image window section connected to the line memory controller, a filter computing section connected to the image window section, a selector connected to the filter computing section and serving as filter factor selecting means, a filter factor 1 setting section connected to the selector and serving as filter factor setting means, and a filter factor 2 setting section connected to the selector and serving as filter factor setting means, the filter factor selecting means selecting either the filter factor 1 setting section or the filter factor 2 setting section in accordance with the sampling rate selection signal;

the line memory controller sequentially stores the first or second image signal, output from the raster scanning type image input means, into the line memories in units of lines in accordance with the main-scanning-directional image effective signal, reads image data of (W x H) pixels around a to-be-processed pixel, including the to-be-processed pixel, from the first or second image signal, stored in the line memories, in accordance with the image clock, and outputs the image data to the image window section, whereby the image window section latches the image data of (W x H) pixels output from the line memory controller, the latched image data being output to the filter computing section;

the filter computing section multiplies each piece of the image data by a filter factor output from the selector as the filter factor selecting means, using a corresponding one of multipliers, and sums up resultant data pieces using a total adding machine;

a total value output from the total adding machine is expressed as a numerical value of (±m, n), m being an integer of m bits, n being a decimal fraction of n bits, (±m, n) being accordingly (m + n + 1) bits; and

the total value is converted into an integer by an integrator and output as a filter processing result of an integer of m bits.

31. (New) The image processing device according to claim 30, wherein the filter factor selected by the selector as the filter factor selecting means and used during the filter processing is used for switching a cutoff frequency.

32. (New) The image processing device according to claim 31, wherein the filter factor selected by the selector as the filter factor selecting means and used during the filter

processing is used for making a cutoff frequency corresponding to the first image signal lower than a cutoff frequency corresponding to the second image signal.

33. (New) The image processing device according to claim 31, wherein:

the filter factor selected by the selector as the filter factor selecting means and used during the filter processing is used for making a cutoff frequency corresponding to the first image signal lower than a frequency acquired by subtracting a main frequency component of an input image signal from twice a vector indicating a Nyquist frequency during processing of the first image signal; and

the filter factor is used for making a cutoff frequency corresponding to the second image signal lower than a main frequency of the input image signal.

34. (New) The image processing device according to claim 31, wherein:

the filter factor selected by the selector as the filter factor selecting means and used during the filter processing is used for making a cutoff frequency corresponding to the first image signal lower than a frequency acquired by subtracting a number of screen lines contained in the document and providing the first image signal, from twice a vector indicating a Nyquist frequency during processing of the first image signal; and

the filter factor is used for making a cutoff frequency corresponding to the second image signal lower than the number of the screen lines contained in the document.

35. (New) A control method for an image processing device comprising:

preparing raster scanning type image input means;

reading images from a document and outputting image signals indicating the images, at different sampling rates, using the raster scanning type image input means;

preparing filter processing means:

performing filter processing on the image signals output from the raster scanning type image input means, using the filter processing means,

wherein:

the raster scanning type image input means outputs, in synchronism with an image clock, a first or second image signal read at a preset sampling rate or a sampling rate higher

than the preset sampling rate in a main scanning direction and a sub-scanning direction of the document, when a sampling rate of reading of the document is switched by an external sampling rate selection signal and the sampling rate selection signal is in a low sampling rate mode or a high sampling rate mode, the raster scanning type image input means also outputting a main-scanning-directional image effective signal when the first or second image signal is output;

the filter processing means includes a line memory controller supplied with the first or second image signal output from the raster scanning type image input means, the main-scanning-directional image effective signal, and the image clock, a plurality of line memories connected to the line memory controller, an image window section connected to the line memory controller, a filter computing section connected to the image window section, a selector connected to the filter computing section and serving as filter factor selecting means, a filter factor 1 setting section connected to the selector and serving as filter factor setting means, and a filter factor 2 setting section connected to the selector and serving as filter factor setting means, the filter factor selecting means selecting either the filter factor 1 setting section or the filter factor 2 setting section in accordance with the sampling rate selection signal;

the line memory controller sequentially stores the first or second image signal, output from the raster scanning type image input means, into the line memories in units of lines in accordance with the main-scanning-directional image effective signal, reads image data of (W x H) pixels around a to-be-processed pixel, including the to-be-processed pixel, from the first or second image signal, stored in the line memories, in accordance with the image clock, and outputs the image data to the image window section, whereby the image window section latches the image data of (W x H) pixels output from the line memory controller, the latched image data being output to the filter computing section;

the filter computing section multiplies each piece of the image data by a filter factor output from the selector as the filter factor selecting means, using a corresponding one of multipliers, and sums up resultant data pieces using a total adding machine;

a total value output from the total adding machine is expressed as a numerical value of (±m, n), m being an integer of m bits, n being a decimal fraction of n bits, (±m, n) being accordingly (m + n + 1) bits; and

the total value is converted into an integer by an integrator and output as a filter processing result of an integer of m bits.

36. (New) The control method according to claim 35, wherein the filter factor selected by the selector as the filter factor selecting means and used during the filter processing is used for switching a cutoff frequency.

37. (New) The control method according to claim 36, wherein the filter factor selected by the selector as the filter factor selecting means and used during the filter processing is used for making a cutoff frequency corresponding to the first image signal lower than a cutoff frequency corresponding to the second image signal.

38. (New) The control method according to claim 36, wherein:

the filter factor selected by the selector as the filter factor selecting means and used during the filter processing is used for making a cutoff frequency corresponding to the first image signal lower than a frequency acquired by subtracting a main frequency component of an input image signal from twice a vector indicating a Nyquist frequency during processing of the first image signal; and

the filter factor is used for making a cutoff frequency corresponding to the second image signal lower than a main frequency of the input image signal.

39. (New) The control method according to claim 36, wherein:

the filter factor selected by the selector as the filter factor selecting means and used during the filter processing is used for making a cutoff frequency corresponding to the first image signal lower than a frequency acquired by subtracting a number of screen lines contained in the document and providing the first image signal, from twice a vector indicating a Nyquist frequency during processing of the first image signal; and

the filter factor is used for making a cutoff frequency corresponding to the second image signal lower than the number of the screen lines contained in the document.